Biomedical Microfluidics

U N I V E R S I T Y O F U T A H

BIOMEDICAL MICROFLUIDICS

The primary focus of the Center for Biomedical Microfluidics is to develop and deliver to market a device for the creation of microarrays composed of proteins, nucleic acids, cells, lipids, sugars, or other materials. The system is unique in that it delivers spots of the desired materials in a system similar to an inkjet printer, providing low cost, high accuracy arrays for the biomedical industry. As part of this focus, the Center is working to develop new applications of the technology and to expand the number and quality of spots that can be produced simultaneously. The elements of the commercialization plan include: partnering with OEMS who will incorporate the spotter in existing sensing tools, researchers and research companies who will use a stand alone spotter to produce their own chips and establish their own protocols for depositing biomaterials and Microarraying companies that produce microarrays and other platforms requiring small spots.

TECHNOLOGY

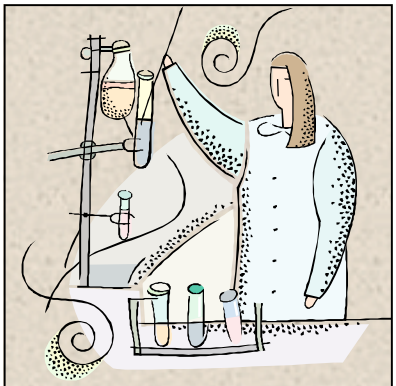
This year, in addition to the existing Continuous Microfluidic Spotter for Proteins and Nucleic acids (DNA), the Center has added the same capabilities for Cells and Lipids. In addition, the Center has collaborated with the Center for Homogenous DNA to develop systems for DNA extraction, amplification, and sensing arrays using microfluidics. Peripheral areas such a micropump design uses an Osmotic pump for delivery over 1 month as well as a Diffusion pumping system are also in development.

ACCOMPLISHMENTS

The Center's accomplishments this year include:

- Generation of over $600,000 in external funding related to Center technologies
- Five new invention disclosures submitted and 2 provisional patent applications filed
- Generation of significant leads for licensing opportunities

In addition, the Center has a spinout, Wasatch Microfluidics, which has been created to assist in taking the Center's technology to market.



THINK TANK

What if there was...

A way to "print" biomedical compounds onto a slide, quickly, easily and inexpensively?

Bruce Gale
The University of Utah
50 S Central Campus Dr
Room 2110
SLC, Utah 84112
Phone: (801)585-5944
gale@eng.utah.edu